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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/755,330 | 01/05/2001 | J. Michael Weaver | 0275D-000289 | 5073 |

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| EXAMINER | |
|---|---|
| FLETCHER, MARLON T | |
| **ART UNIT** | **PAPER NUMBER** |
| 2837 | |

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/755,330 | WEAVER ET AL. | |
| | Examiner | Art Unit | |
| | Marlon T. Fletcher | 2837 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,3-13 and 44-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *44-49* is/are allowed.

6)☒ Claim(s) *1 and 3-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Objections*

1. Claim 3 is objected to because of the following informalities:

Claim 3 depends from claim 3.

Appropriate correction is required.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-9 and 11-13, are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 14, 17-23 of copending Application No. 10/169,638. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter recited in the above present claims are found in the copending application, wherein the present claims are written in a broader recitation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herman et al. (5,907,205).

As recited in claims 1 and 11, Herman et al. (5,907,205) discloses a brushless DC motor, comprising; a rotor assembly (22) including a rotatable shaft (24) having a permanent magnet affixed to the shaft; a plurality of coils (30) for producing a magnetic field for applying a torque to the rotor assembly (22), said coils (30) including end turns that enclose the rotor assembly such that the rotor assembly is not removable (figures 4 and 5); a stator stack (32) made of a stator magnetic material for providing a magnetic flux return path as discussed in column 3, lines 38-50; a position sensor system (40) for sensing the positional relationship that the coils have with the permanent magnet (column 4, lines 45-65); and a controller coupled to the position sensor for controlling the application of a power source to the coils in response to the positional relationship of the coils and the permanent magnet (column 4, lines 45-65).

Herman et al. further disclose a plurality of coils for producing a magnetic field for applying a torque to the rotor assembly, said coils including end turns that enclose the rotor assembly such that the rotor assembly is not removable.

As recited in claim 7, Herman et al. discloses the DC motor, wherein the coils are layer wound as seen in figures 6 and 7B.

As recited in claims 8 and 12, Herman et al. disclose the DC motor, wherein the stator magnetic material is a laminated silicon steel as discussed in column 2, lines 50-57.

As recited in claims 9 and 13, Herman et al. disclose the DC motor, further comprising a position sensor system selected from the group comprised of: Hall effect sensors and leakage flux sensors as discussed in column 4, lines 57-65.

As recited in claim 10, Herman et al. discloses the DC motor, wherein the permanent magnet is magnetized after the plurality of coils are wound as discussed in column 4, lines 36-42.

Herman et al. disclose that said end turns do not necessarily have to minimize any gap between respective ends of the rotor assembly and the end turns adjacent the respective ends of the rotor assembly (figures 5 and 6).

However, Herman et al. only recites that it is not necessary. Herman et al. acknowledges that it is well known to arrange the turns to minimize any gap between respective ends of the rotor assembly and the end turns. However, this is an alternative. For that reason, it would have been obvious to one of ordinary skill in the

art at the time of the invention to alternatively used small gaps to minimize space between the coils, for providing a magnetic field for applying the torque.

6. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herman et al. in view of Shramo.

Herman et al are discussed above. Herman et al. do not disclose a tube and a plurality of teeth.

However, with respect to claim 3, Shramo provides a winding form which further includes a tube, a plurality of teeth (figures 2 and 3).

As recited in claim 4, Shramo discloses the tube, end plug, and teeth are made from molded plastic (column 3, lines 31-36).

As recited in claims 5 and 6, Shramo discloses the DC motor, wherein the coils are wound in a three phase winding configuration selected from the group of: Delta configuration and Wye configuration as discussed in column 4, lines 59-65.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Shramo with the apparatus of Herman et al., because it provides another design for applying the coils over the coil form, which provides more power or magnetic flux over the coil form.

***Allowable Subject Matter***

7. Claims 44-49 are allowed.

***Response to Amendment***

8. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Response to Arguments***

9. Applicant's arguments with respect to claims 1 and 3-13 have been considered but are moot in view of the new ground(s) of rejection.

While the applicant's arguments have been considered, it is believed that since Herman et al. addresses the ability to minimize the gap between coils or turns, it would be an obvious modification. Since the examiner agreed to withdraw the final, the final has been withdrawn and the rejection has been changed in a way to support the obvious type of modification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marlon T. Fletcher whose telephone number is 571-272-2063. The examiner can normally be reached on M-W, F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marlon T Fletcher
Primary Examiner
Art Unit 2837

MTF
April 26, 2005